

Figure 1. Spectrum of Standard NTSC Signal with Overlay Data Channel

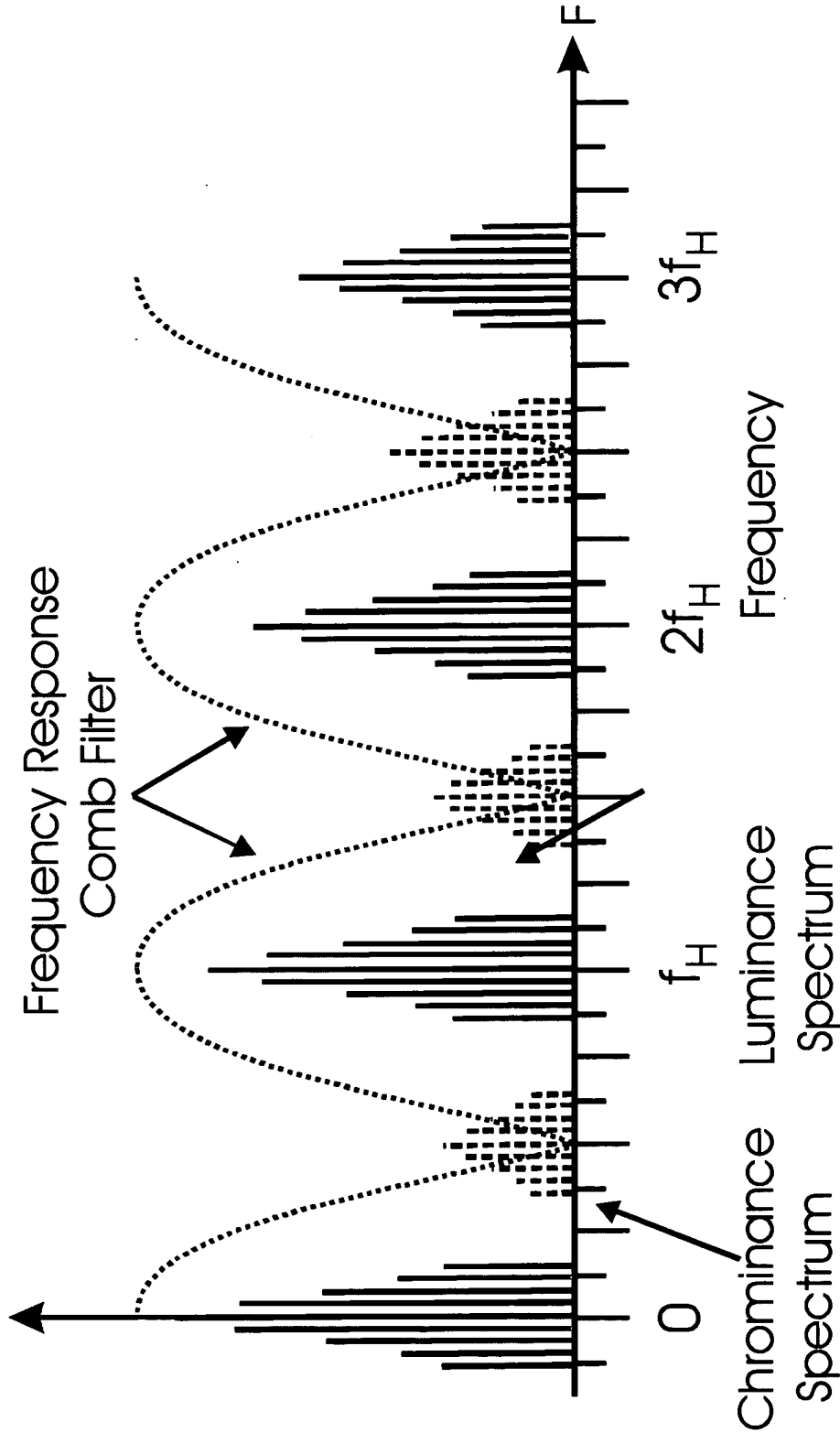


Figure 2. Luminance and Chrominance Spectral Clusters at Multiples of Horizontal Line Frequency and Comb Filter Frequency Response that Passes Luminance Spectrum

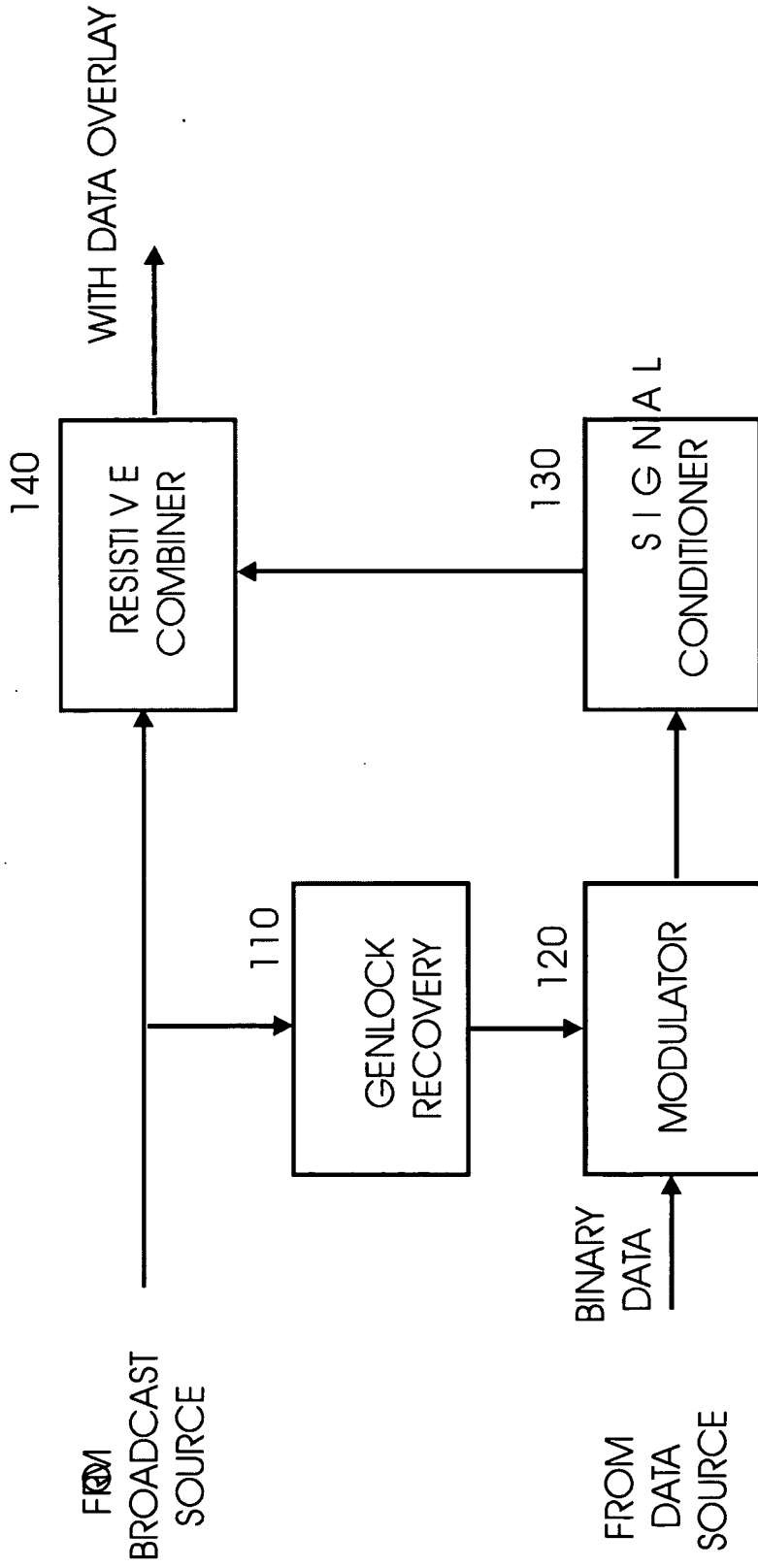


Figure 3 Diagram of Modulator Signal Processing Blocks and Signal Flow at Transmitter

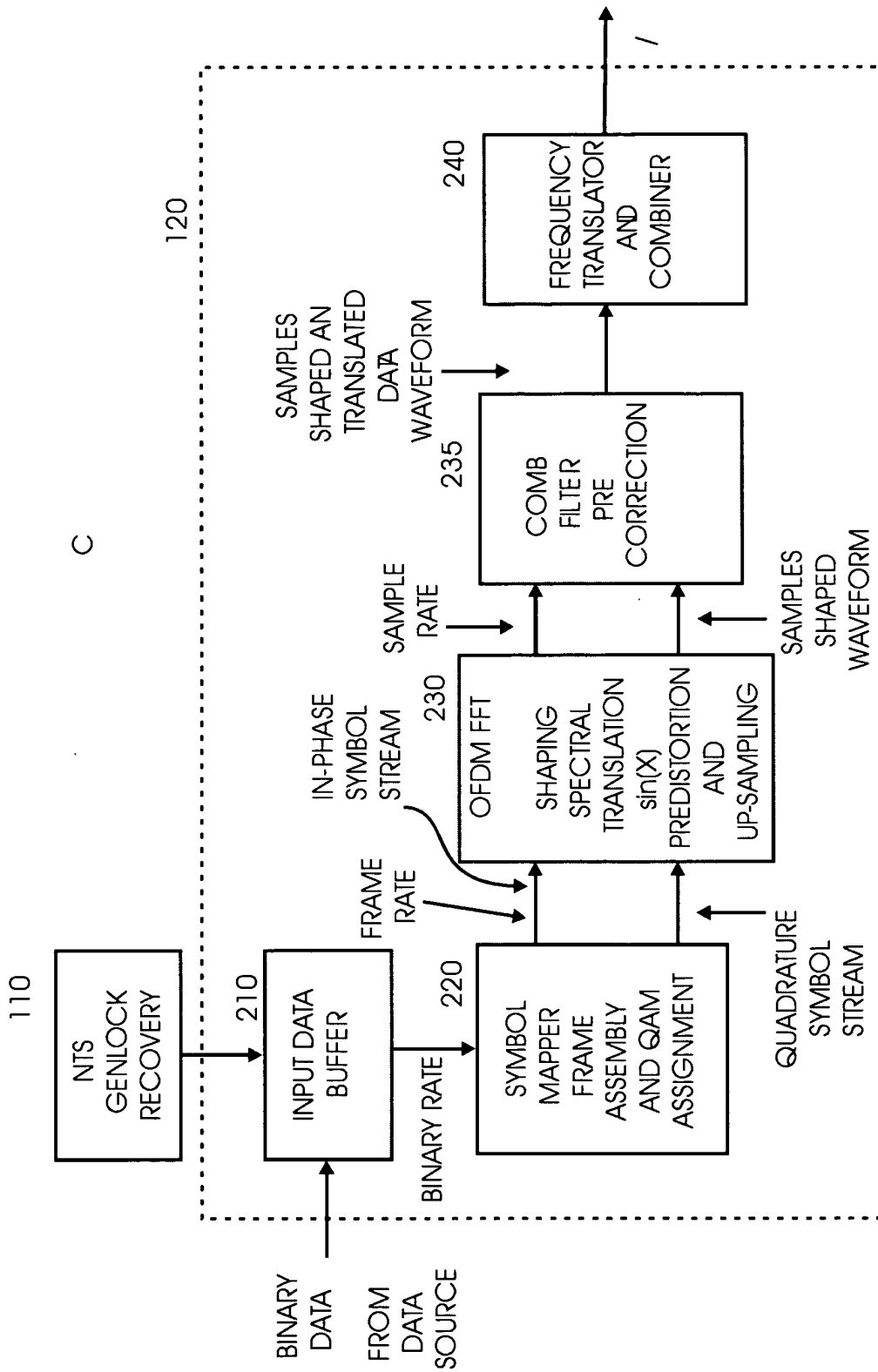


FIGURE 4. DIGITAL DATA MODULATOR

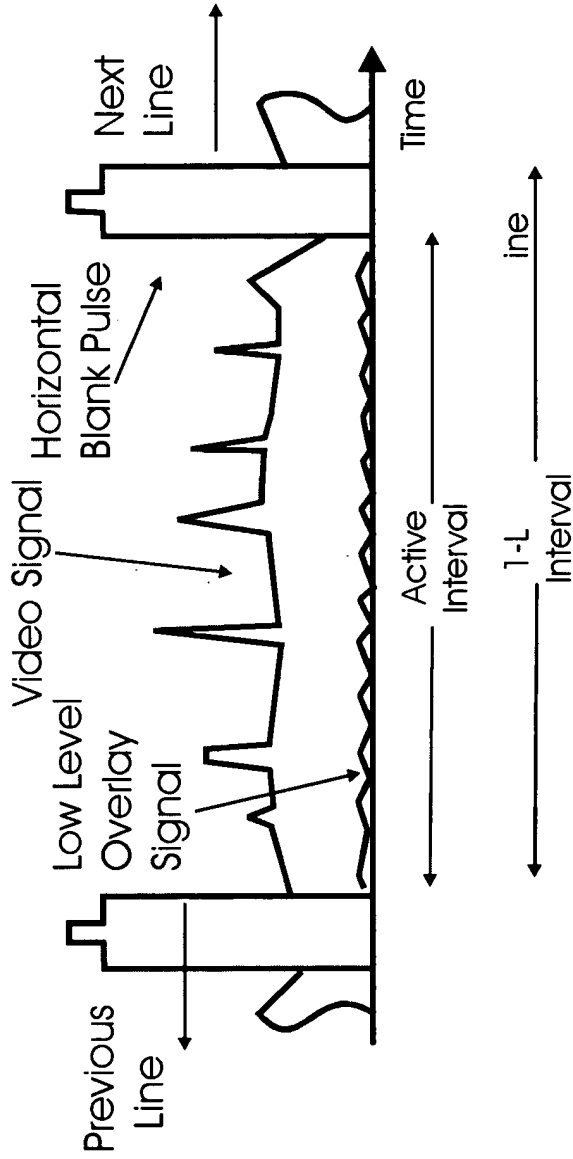


Figure 5. Time Domain Representation of NTSC Horizontal Line Showing Temporal Position of Low Level OFDM Modulated Data

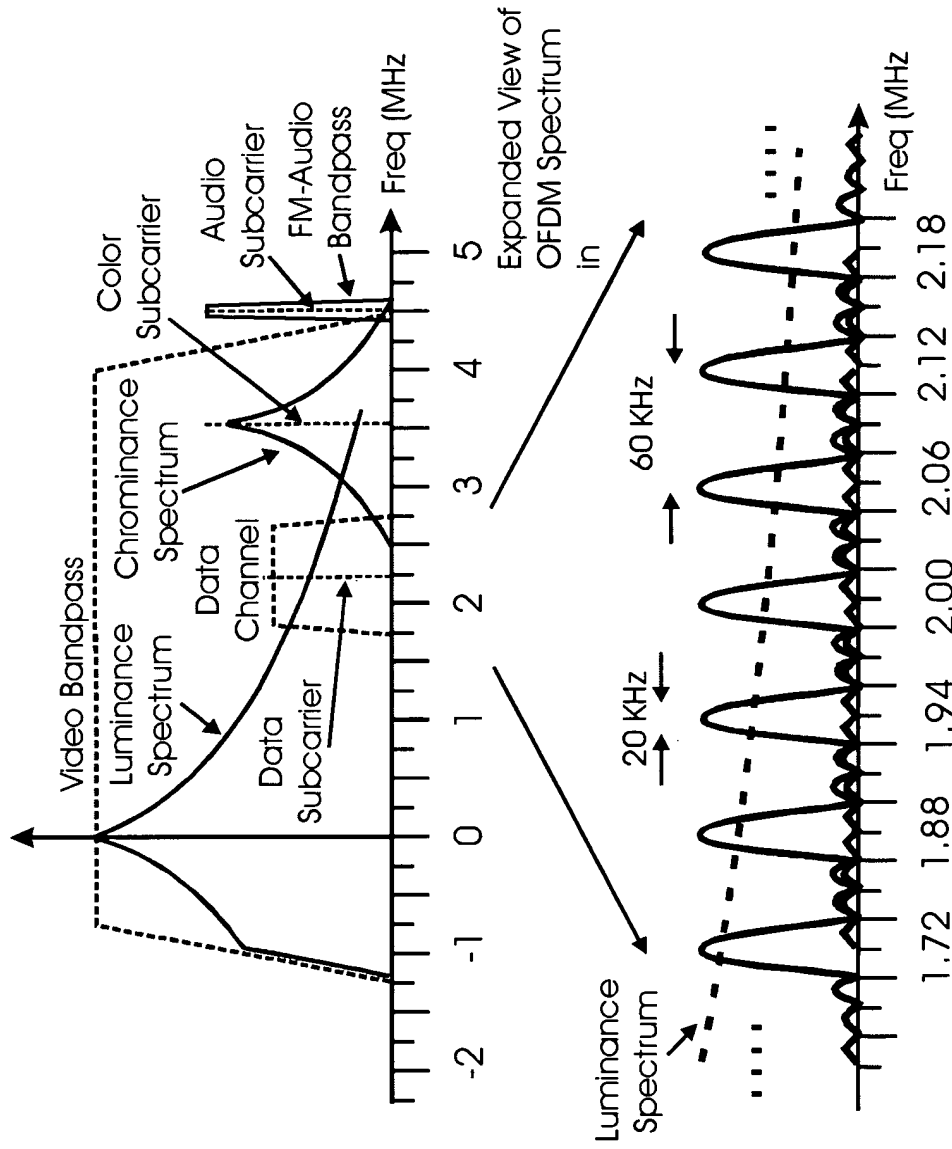


Figure 6. Typical Spectral Structure of Modified OFDM Overlay Signal Seen By Expanding Spectral Region Occupied by Data Channel

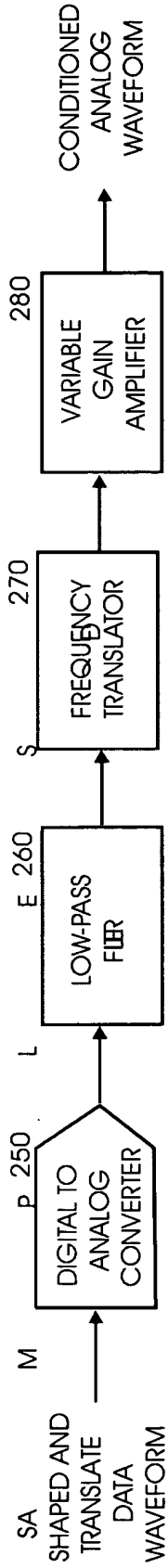


FIGURE 7. ANALOG SIGNAL CONDITIONING BLOCK

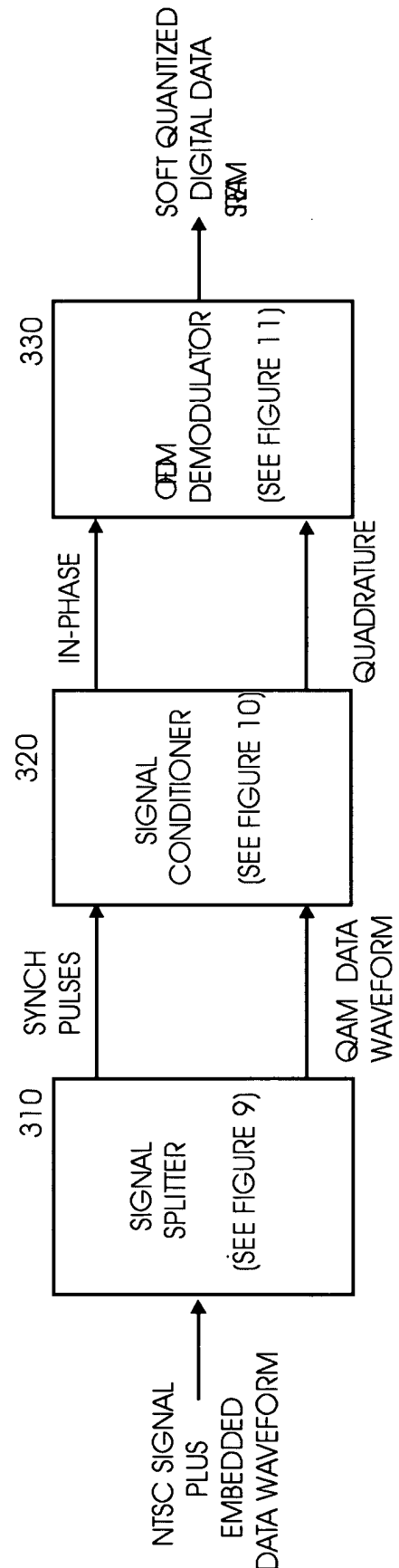


FIGURE 8. DATA DEMODULATOR SIGNAL FLOW





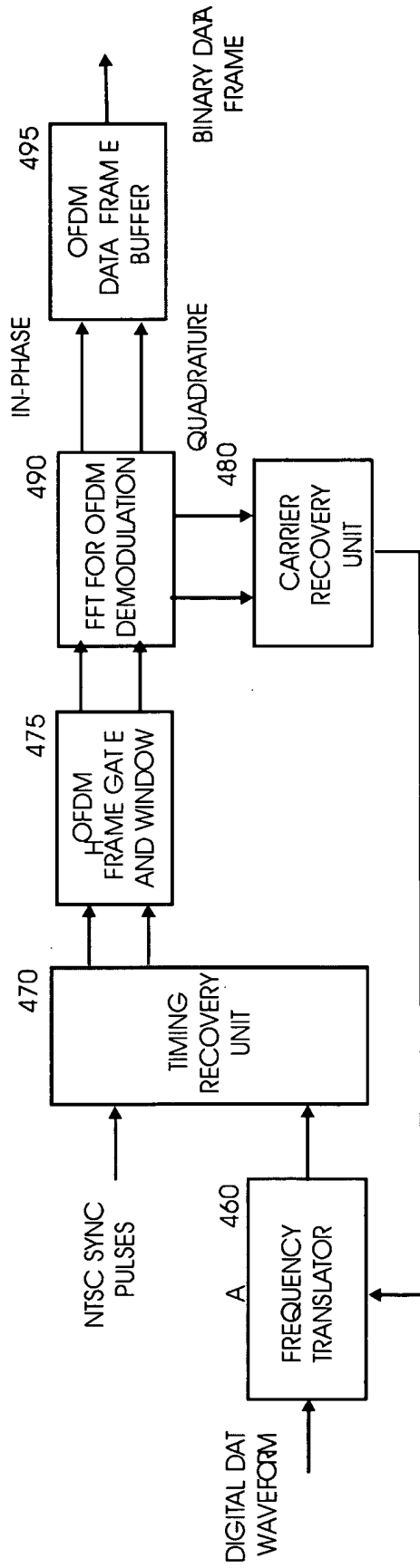


FIGURE 10. SIGNAL DEMODULATOR

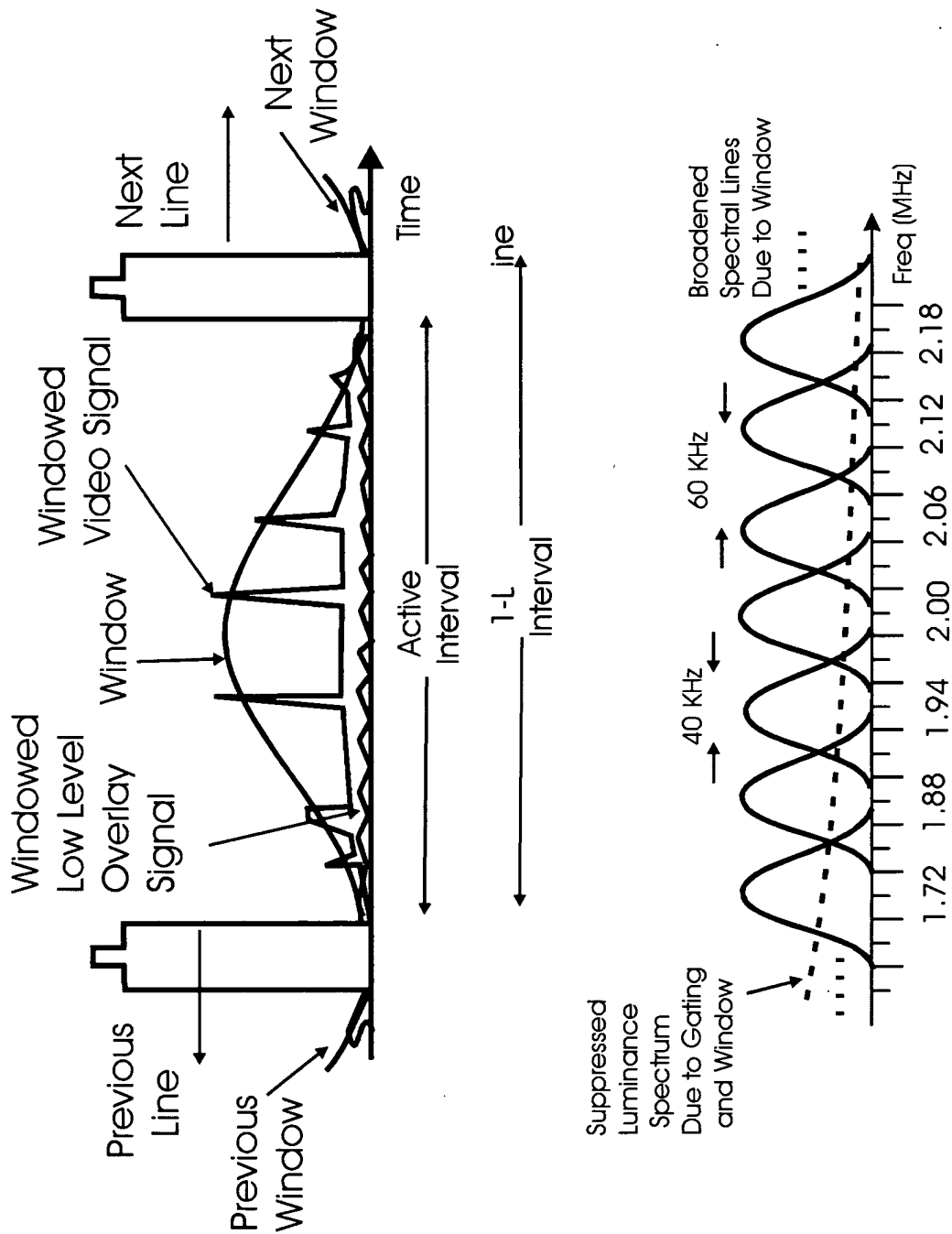


Figure 11: Time and Frequency Domain Effect of Gating and Windowing Active Line Interval Containing Overlaid OFDM Signal

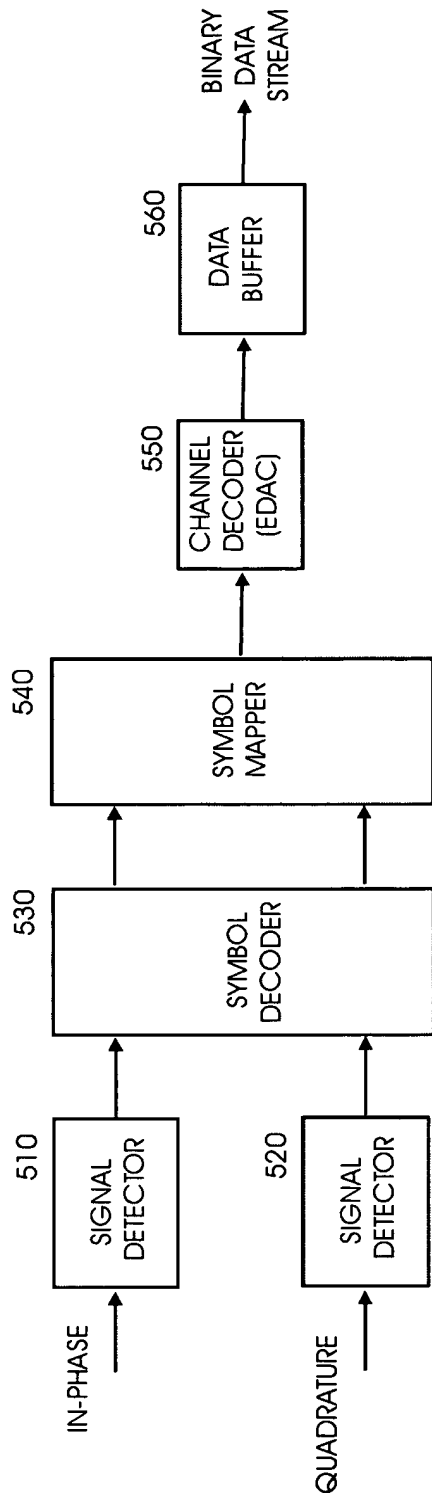


FIGURE 12. DATA DETECTOR AND DECODER

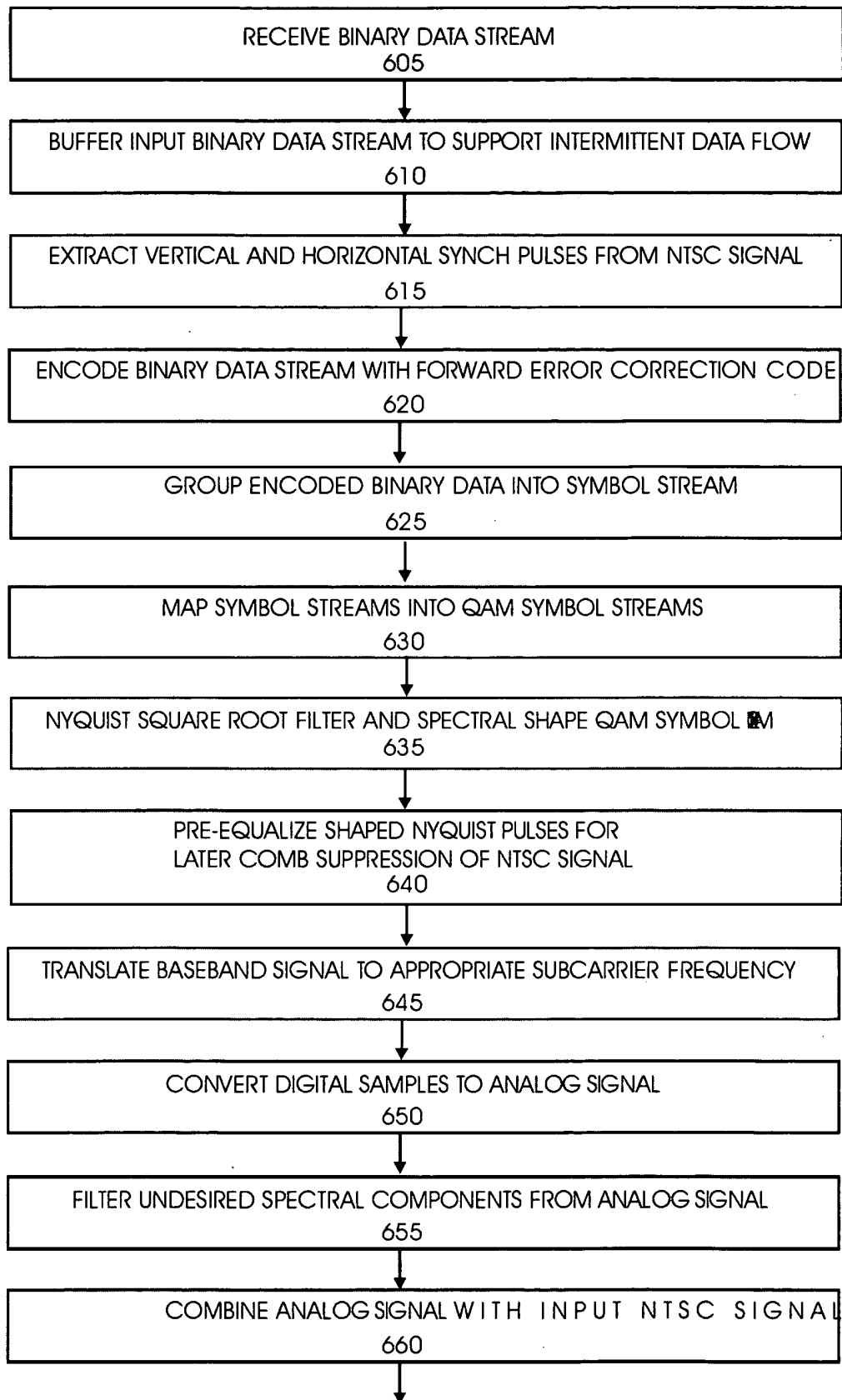


Figure 13. Signal Processing Flow through Modulator

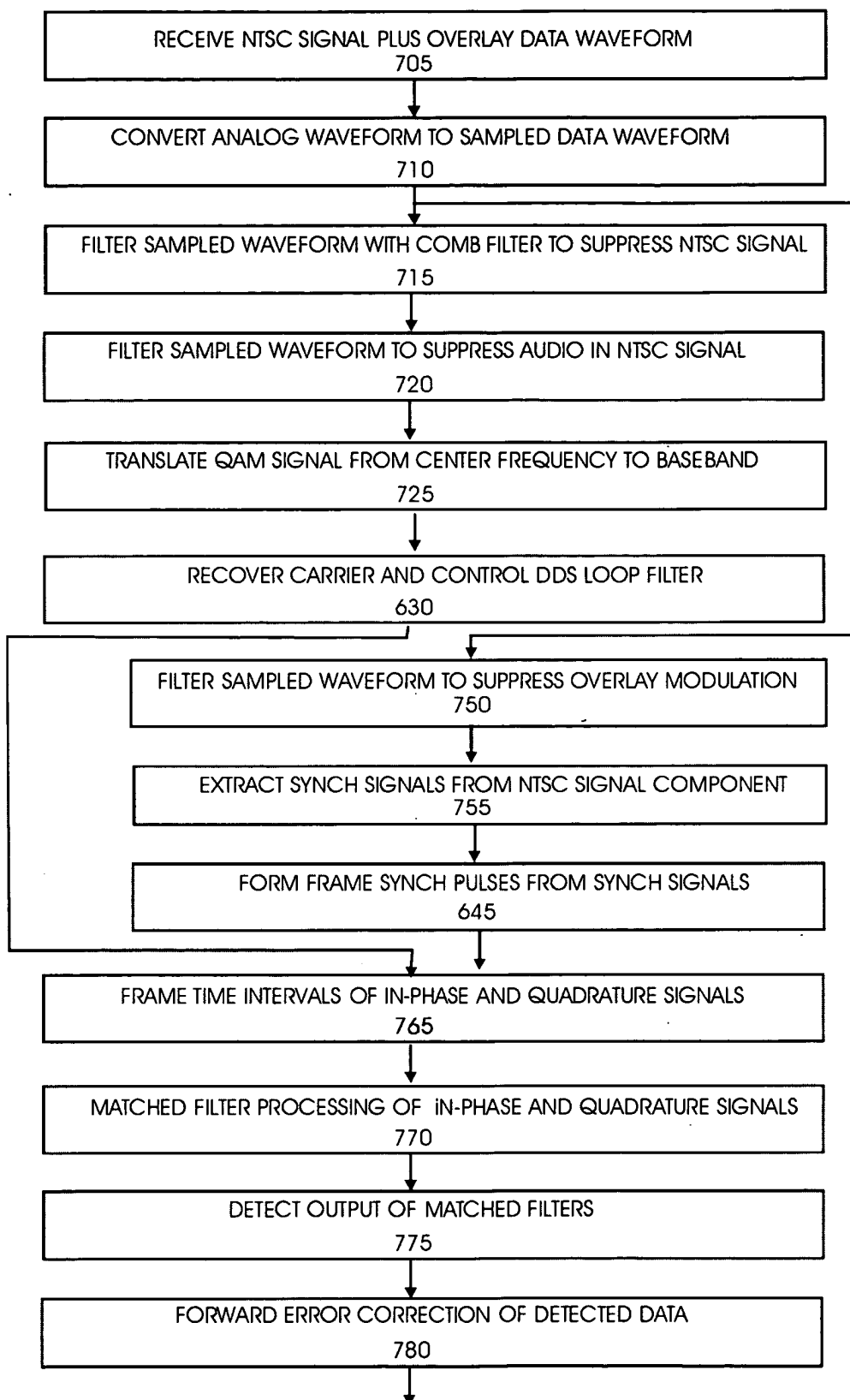


FIGURE 14. Signal Processing Flow Through Demodulator